

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended): A method for determining an intraperitoneal volume during peritoneal dialysis, comprising the steps of:

passing a peritoneal solution from a peritoneal cavity in a first circuit adjacent a first side of a semipermeable membrane;

passing a dialyzing fluid in a second circuit adjacent a second side of the semipermeable membrane;

measuring the concentration of an endogenous substance in the peritoneal solution, wherein the endogenous substance that passes through a peritoneum into the peritoneal solution in the peritoneal cavity; and

determining the intraperitoneal volume from the variation in the concentration over time.

2 (currently amended): The method according to claim 1, wherein the measuring step further comprises:

measuring the concentration c_0 of the endogenous substance in the peritoneal solution at a time t_1 ;

withdrawing or delivering a predetermined volume ΔV of fluid in the first circuit;

measuring the concentration c_1 of the endogenous substance in the peritoneal solution at a time t_2 ; and

wherein the determining step further comprises:

determining the intraperitoneal volume from the equation:

$$V = \frac{\Delta V}{1 - c_0 / c_1}$$

3 (original): The method according to claim 2, which further comprises the step of:

determining an ultrafiltration rate $V (t_1)/t_1$ from the variation in intraperitoneal volume in the time $t_1 - t_2$;

withdrawing fluid from the first circuit at the ultrafiltration rate.

4 (original): The method according to claim 3, which further comprises the step of:

determining continuously the variation in intraperitoneal volume during peritoneal dialysis for determination of the ultrafiltration rate.

5 (original): The method according to claim 1, wherein the endogenous substance is albumin.

6 (canceled)

7 (canceled)

8 (canceled)

9 (canceled)

10 (canceled)